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**United States Patent** [19]**Suggs**[11] **Patent Number:** **6,009,214**[45] **Date of Patent:** **Dec. 28, 1999**[54] **MULTI-RESOLUTION COLOR CONTACT-  
TYPE IMAGE SENSING APPARATUS**[75] **Inventor:** **Bradley Suggs, Sunnyvale, Calif.**[73] **Assignee:** **Hewlett-Packard Company, Palo Alto,  
Calif.**[21] **Appl. No.:** **08/959,062**[22] **Filed:** **Oct. 28, 1997**[51] **Int. Cl.<sup>6</sup>** ..... **G06K 7/00**[52] **U.S. Cl.** ..... **382/312; 348/302**[58] **Field of Search** ..... **382/312; 358/483;  
348/302, 315**[56] **References Cited****U.S. PATENT DOCUMENTS**

4,204,230	5/1980	Sprague	358/213
4,725,889	2/1988	Yaniv et al.	358/285
4,782,399	11/1988	Sato	358/280
4,853,785	8/1989	Ovshinsky et al.	358/213.11
5,264,939	11/1993	Chang	358/213.22

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A multi-resolution color contact-type image sensing apparatus whereby a color image of an original can be obtained with a particular resolution, depending upon the size of the original image. A first array of photosensor segments with a base resolution is arranged with at least one other array of photosensor segments having a greater-than-base resolution. All such photosensor segments might aligned in a single linear array, with at least one portion of segments having a greater-than-base resolution. A resulting image with at least the base resolution could be created depending upon the size of the original in relation to the placement and width of the greater-than-base resolution segments. A plurality of linear arrays might also be used, with each successive array having a greater resolution than the previous array. Moreover, the arrays might be arranged in parallel with each successive array being narrower in width than the previous. Each linear array could be operated independently or in conjunction with the other linear arrays to produce multi-resolution resulting images. The resolution could be manually or automatically selected.

**20 Claims, 3 Drawing Sheets**